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# In Vitro Growth of CD4+ Peripheral Blood T Cells in Serum-Free Medium

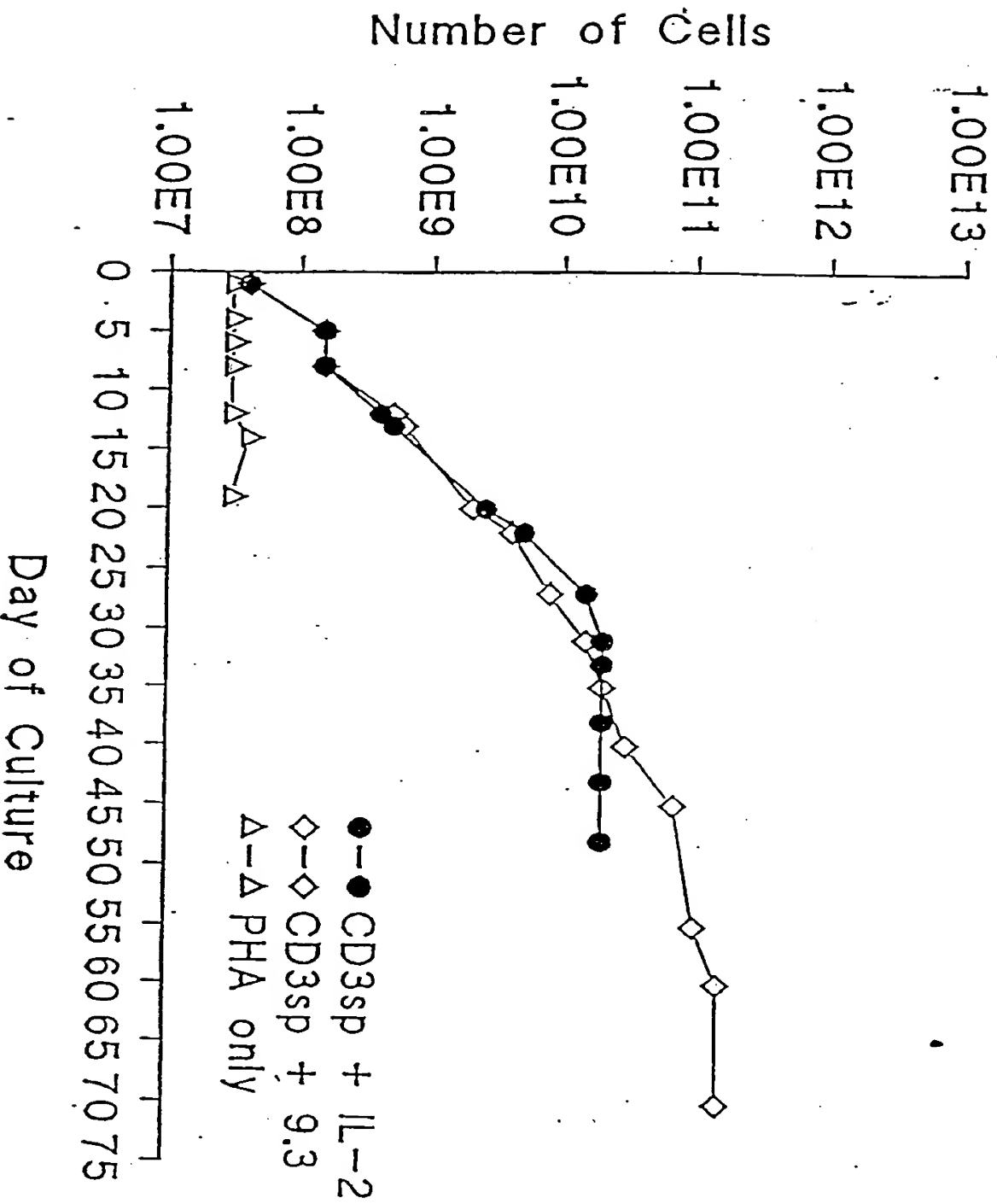


FIG. 1

# GAMMA/DELTA NO. 7

(RPMI w/ 10% FCS)

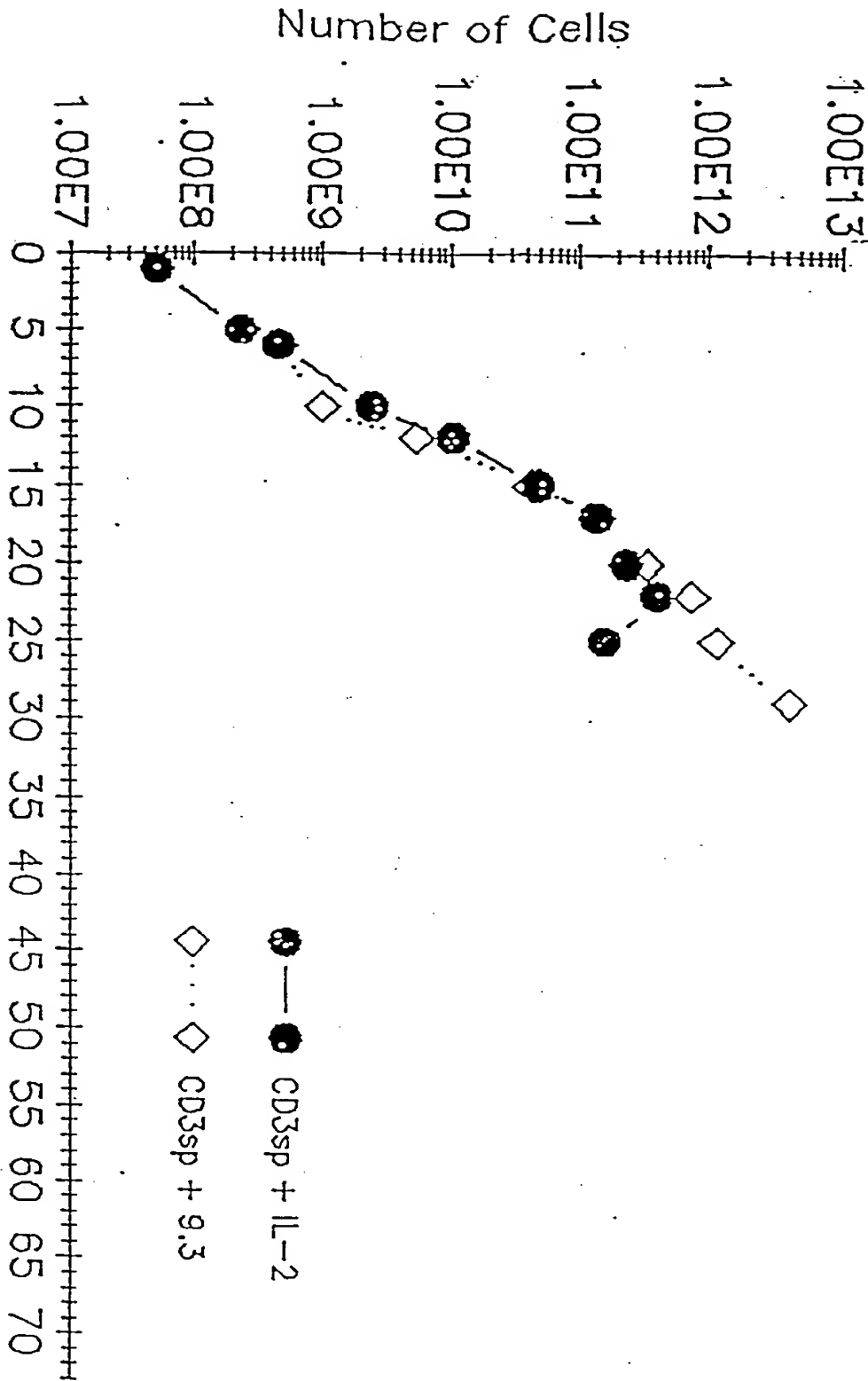


FIG. 2

# LT #13: GROWTH CURVES

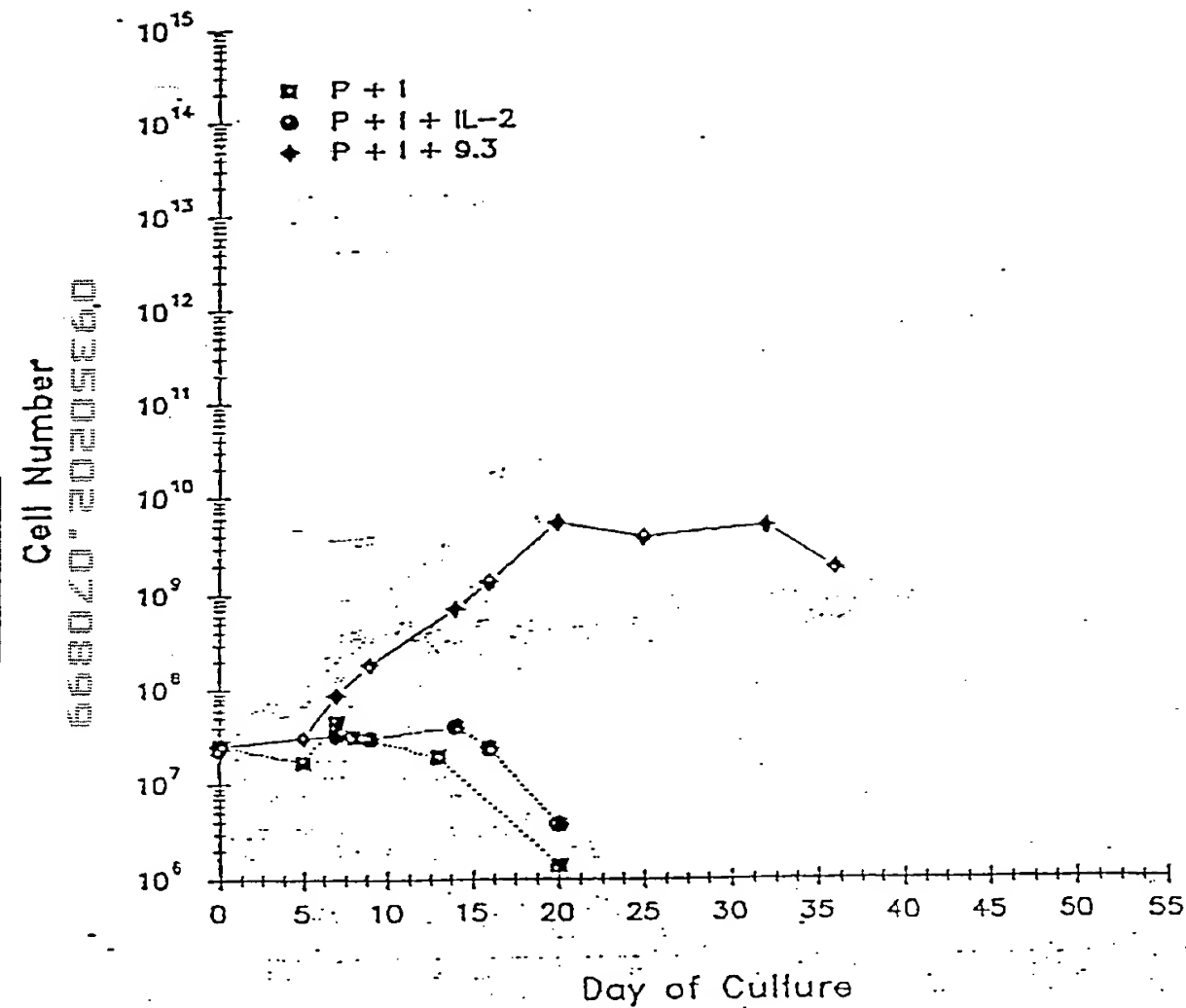
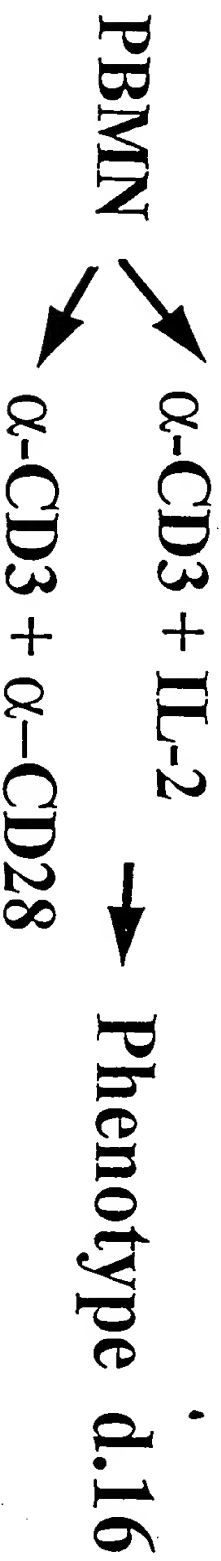


FIG. 3

# Selective Outgrowth of CD4<sup>+</sup> T Cells During CD28 Stimulated T Cell Expansion



| Culture    | Day 0 |     | Day 16 |     |
|------------|-------|-----|--------|-----|
|            | CD4   | CD8 | CD4    | CD8 |
|            | 30.9  |     | 13.9   |     |
| CD3 + IL-2 | 8.0   |     | 84.5   |     |
| CD3 + CD28 | 44.6  |     | 52.5   |     |

FIG. 4

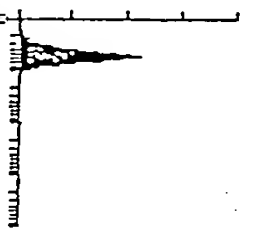
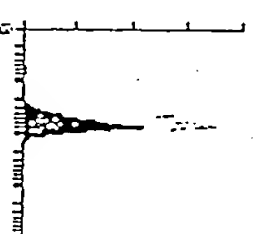
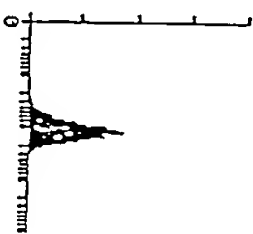
A.  
RESTING CELLS  
DAY 0

CONTROL

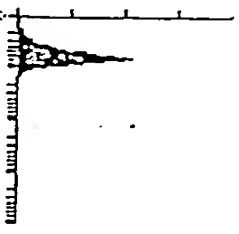
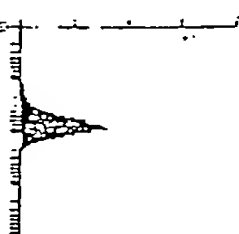
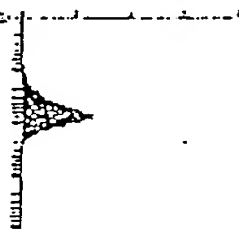
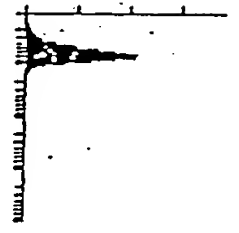
ANTI-CD3

ANTI-CD4

ANTI-CD8



B.  
CD3 + CD28 DRIVEN  
CELLS, DAY 26



C.  
CD3 + IL-2 DRIVEN  
CELLS, DAY 26

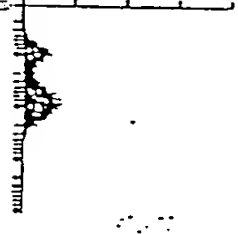
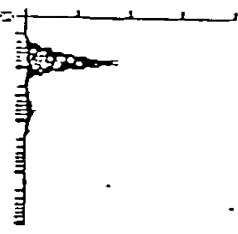
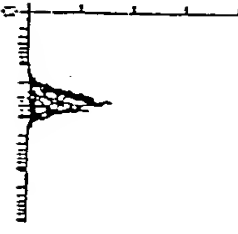
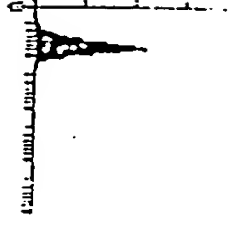
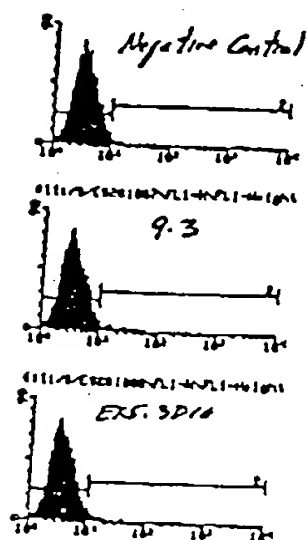


FIG. 5

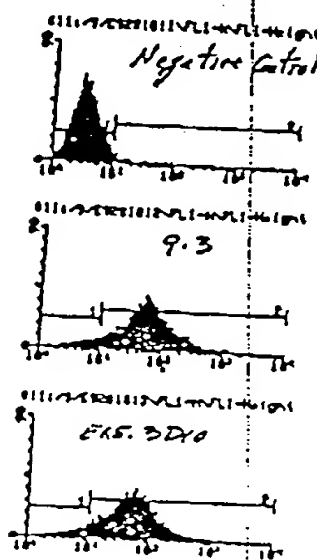
09350202 070899

# mAb EX5.3D10

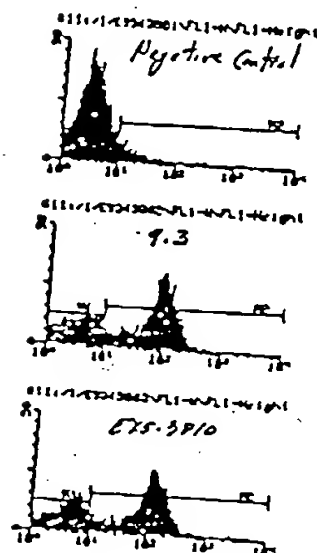
a. CHO-DG44 cells



b. CHO-hh cells



c. Unactivated PBLs



d. Jurkat #7 cells

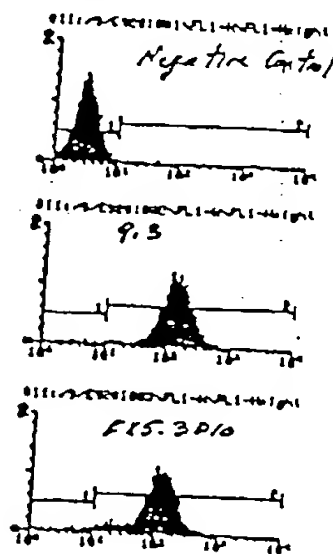
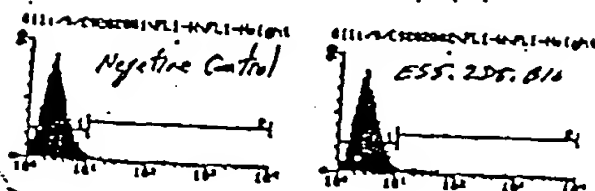


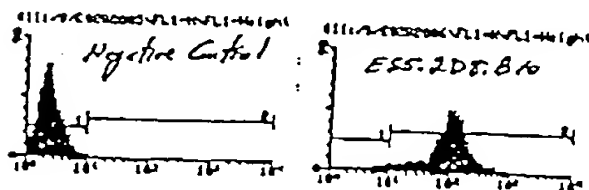
FIG. 6

mAb ES5.2D8

a. CHO-DG44 cells



b. CHO-105A cells



hPBLs:

c. Unactivated

d. PMA Activated

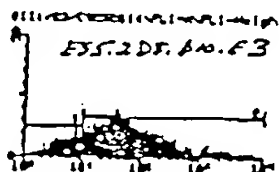
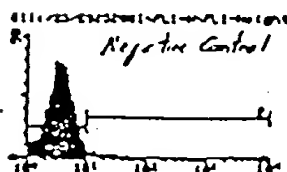


FIG. 7



09350202.070899

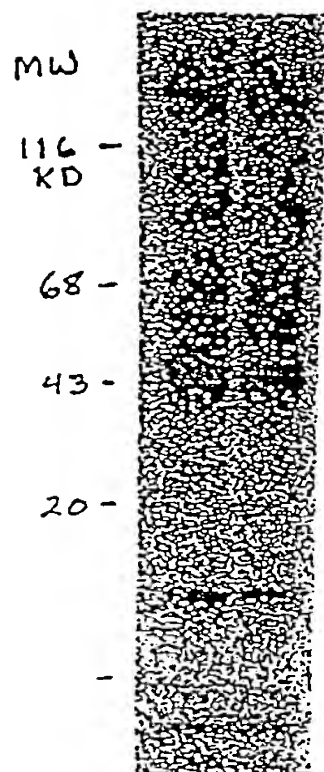


FIG. 8

# Use of Cell Sizing to Propagate

CD4<sup>+</sup> T Cells

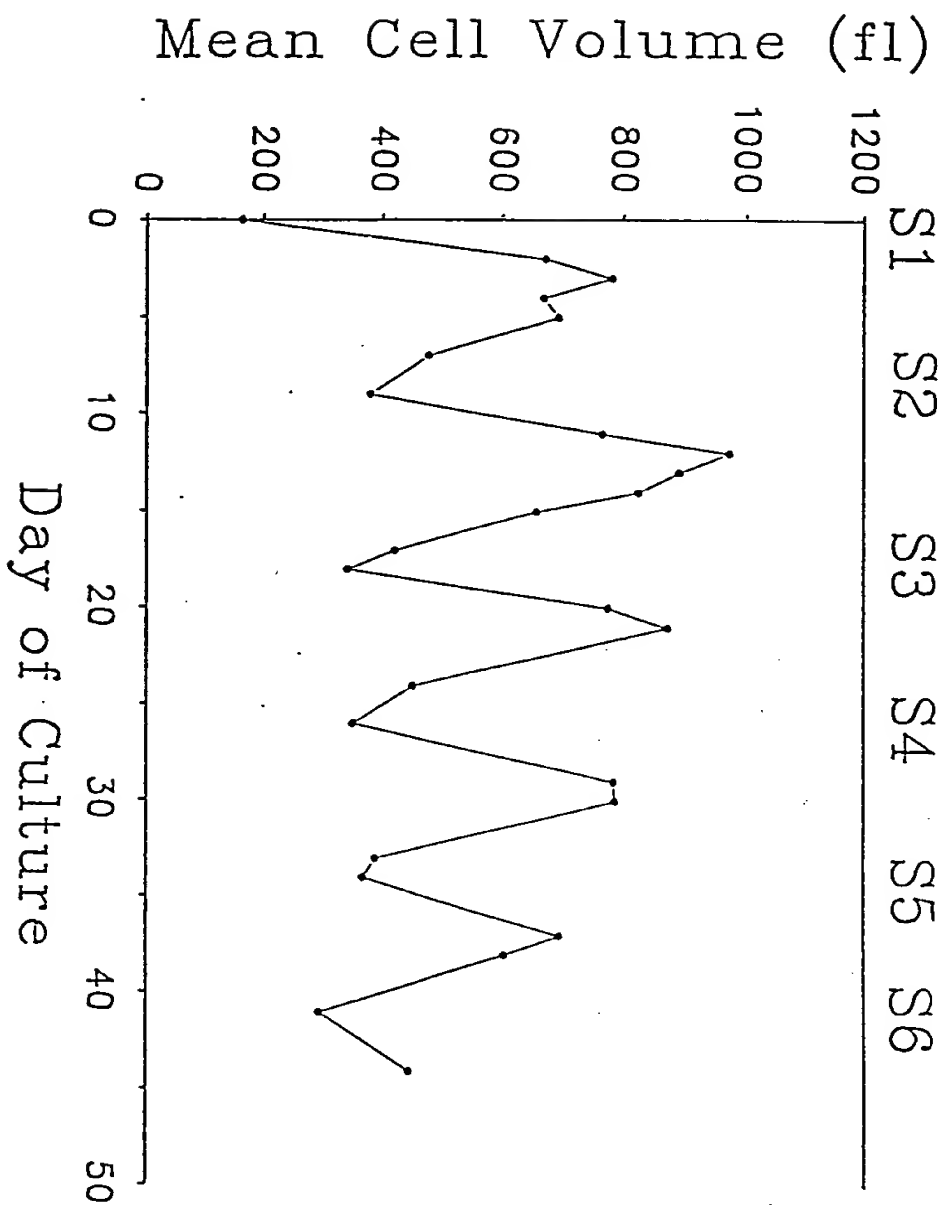


FIG. 9

Cells: CD28<sup>+</sup>/CD4<sup>+</sup>  
Stimulation: CD3sp + CD28  
09350202.070899

# Cyclic Expression of B7 on CD4<sup>+</sup> T Cells

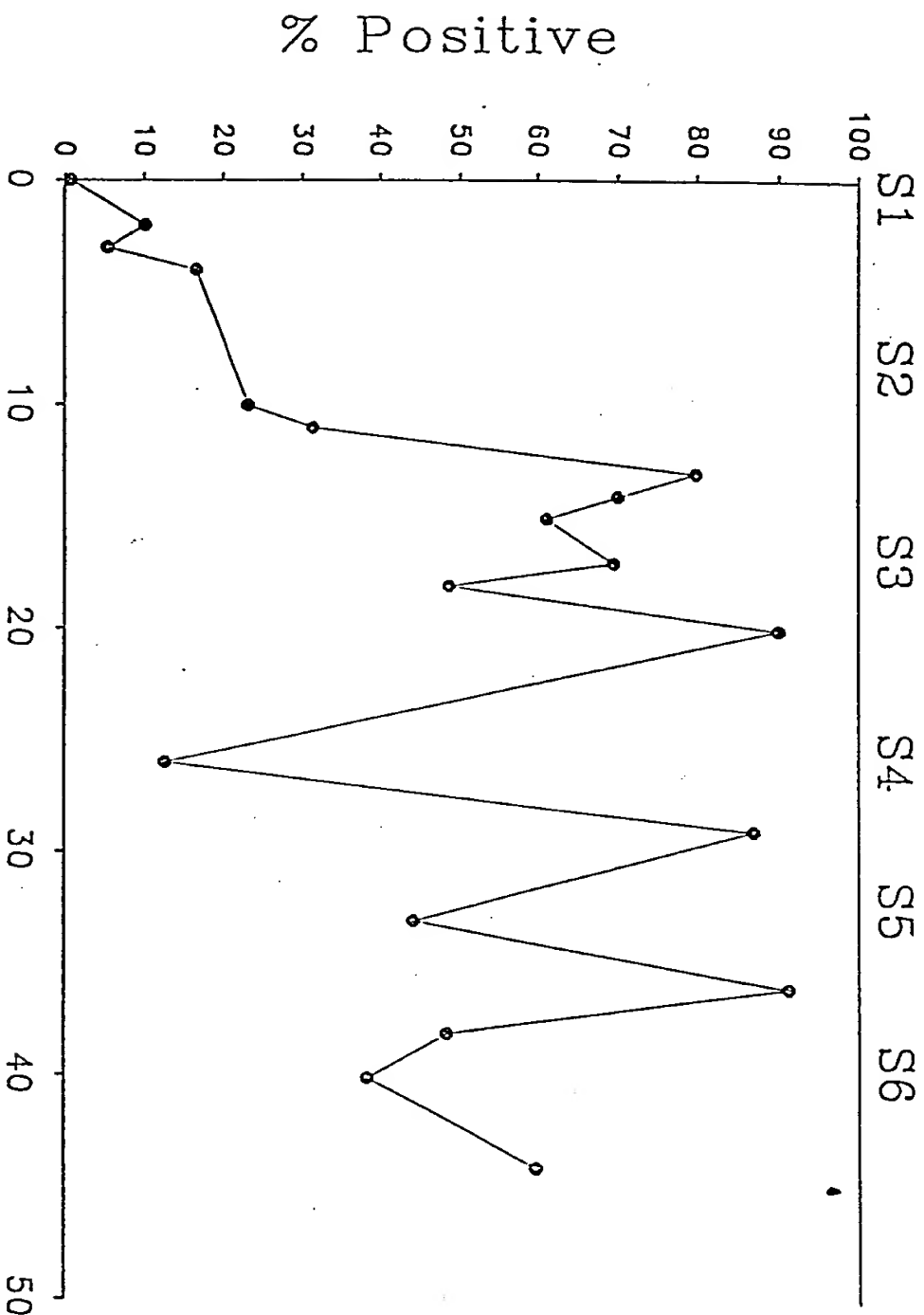


FIG. 10

Cells: CD4<sup>+</sup>/CD28<sup>+</sup> Day of Culture

Stimulation: CD3sp + CD28

09350202.070899

# Cytokine Accumulation in Culture Supernatants

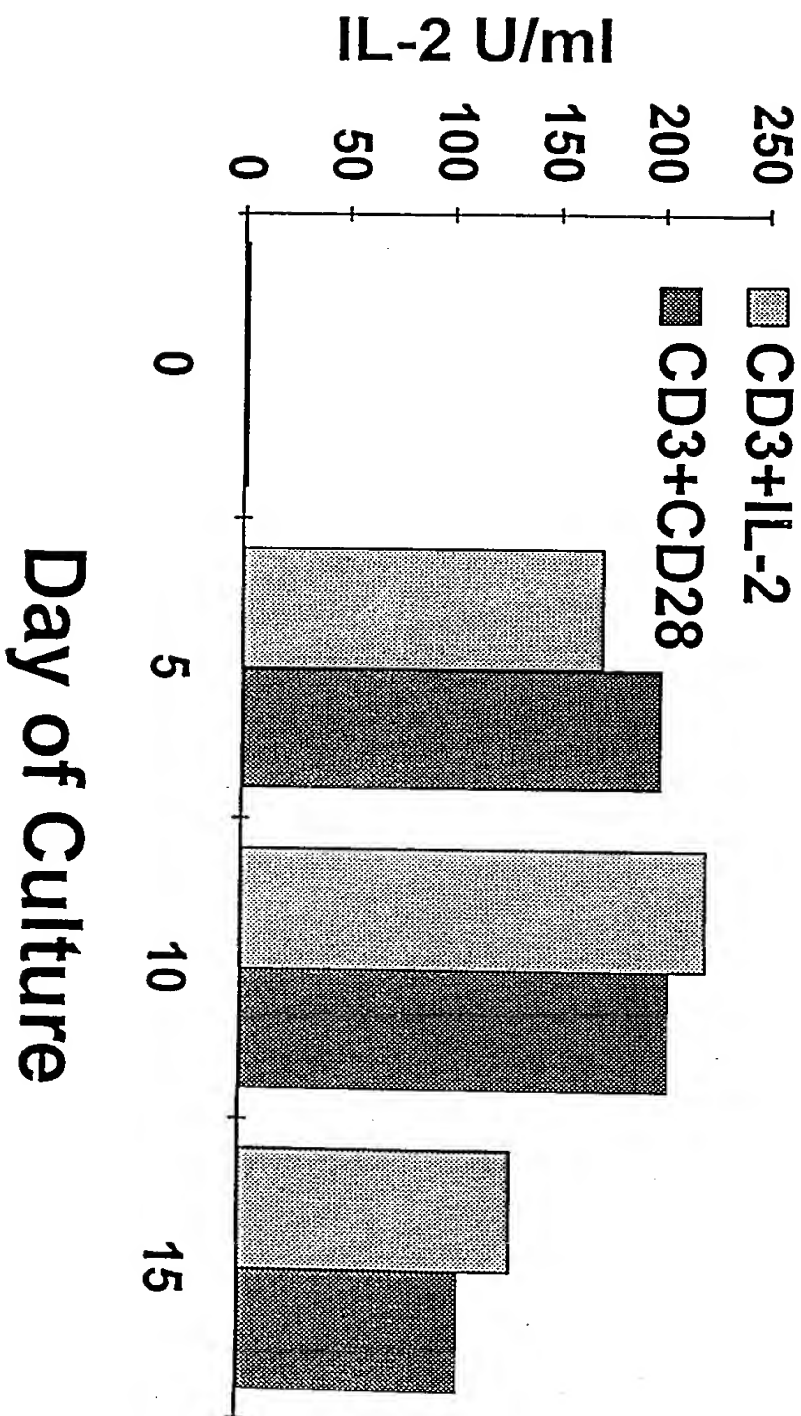


FIG. 11

# Cytokine Accumulation in Culture Supernatants

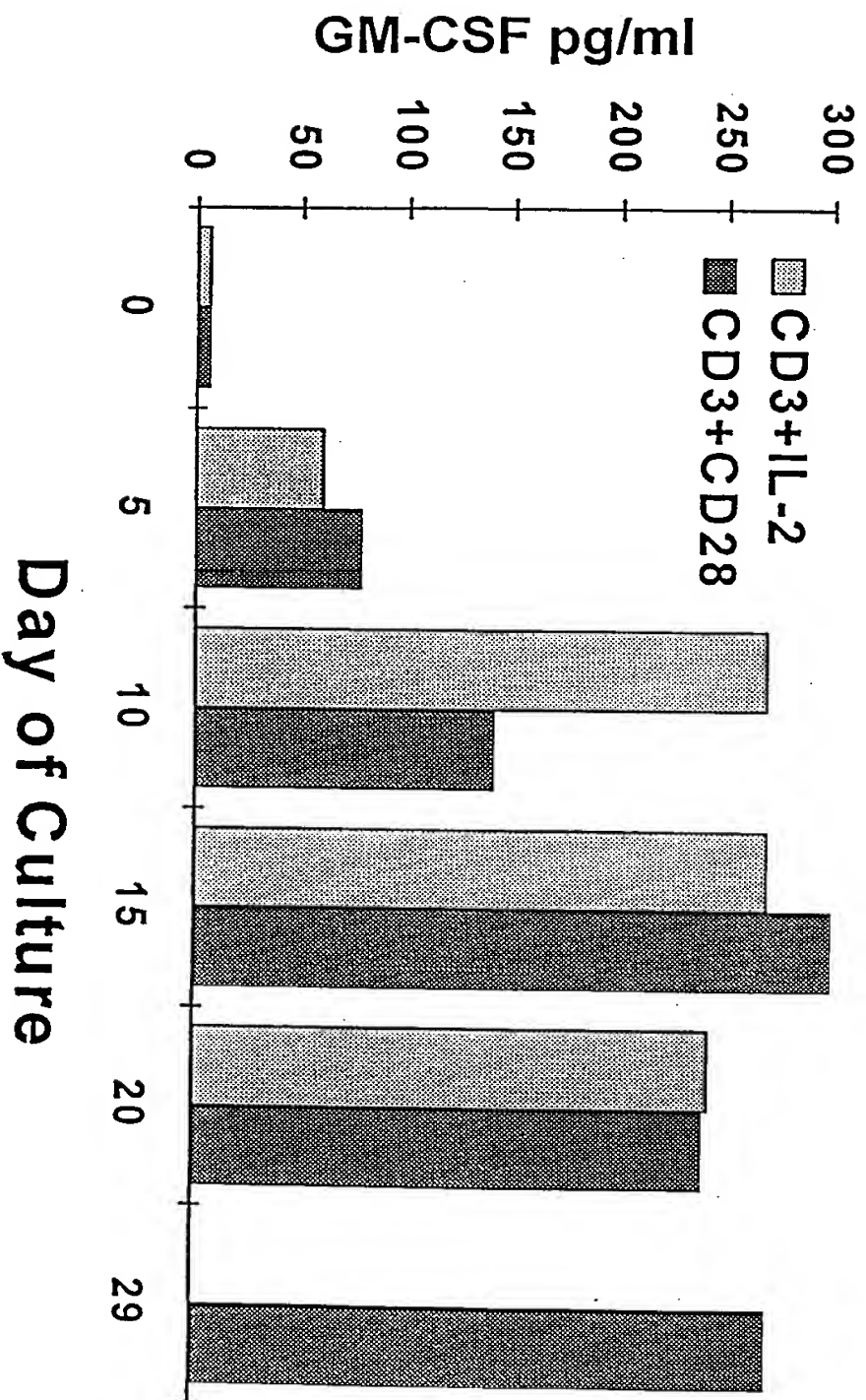


FIG. 12

# Cytokine Accumulation in Culture Supernatants

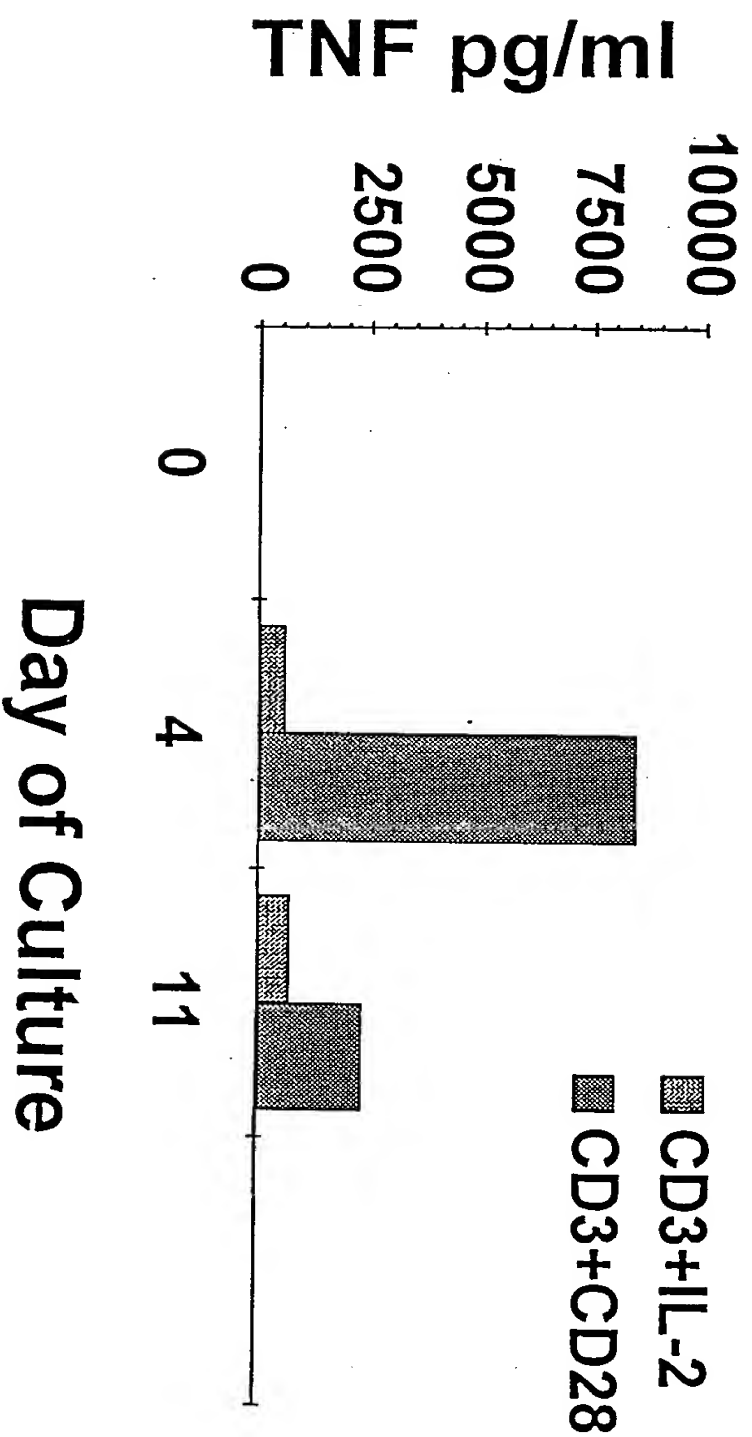


FIG. 13

# TCR Diversity

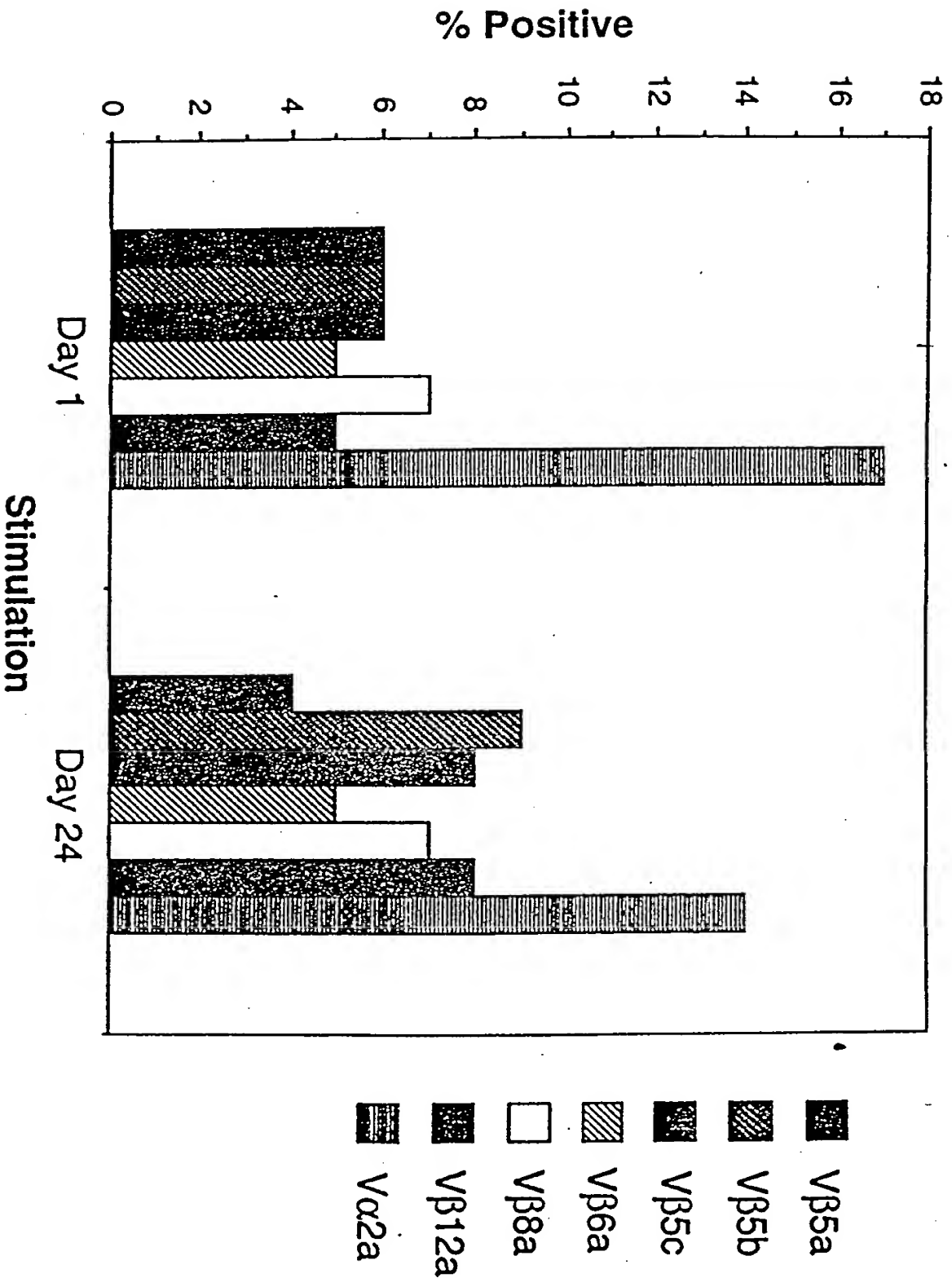


FIG. 14

# (HIV-) Cell Surface Staining

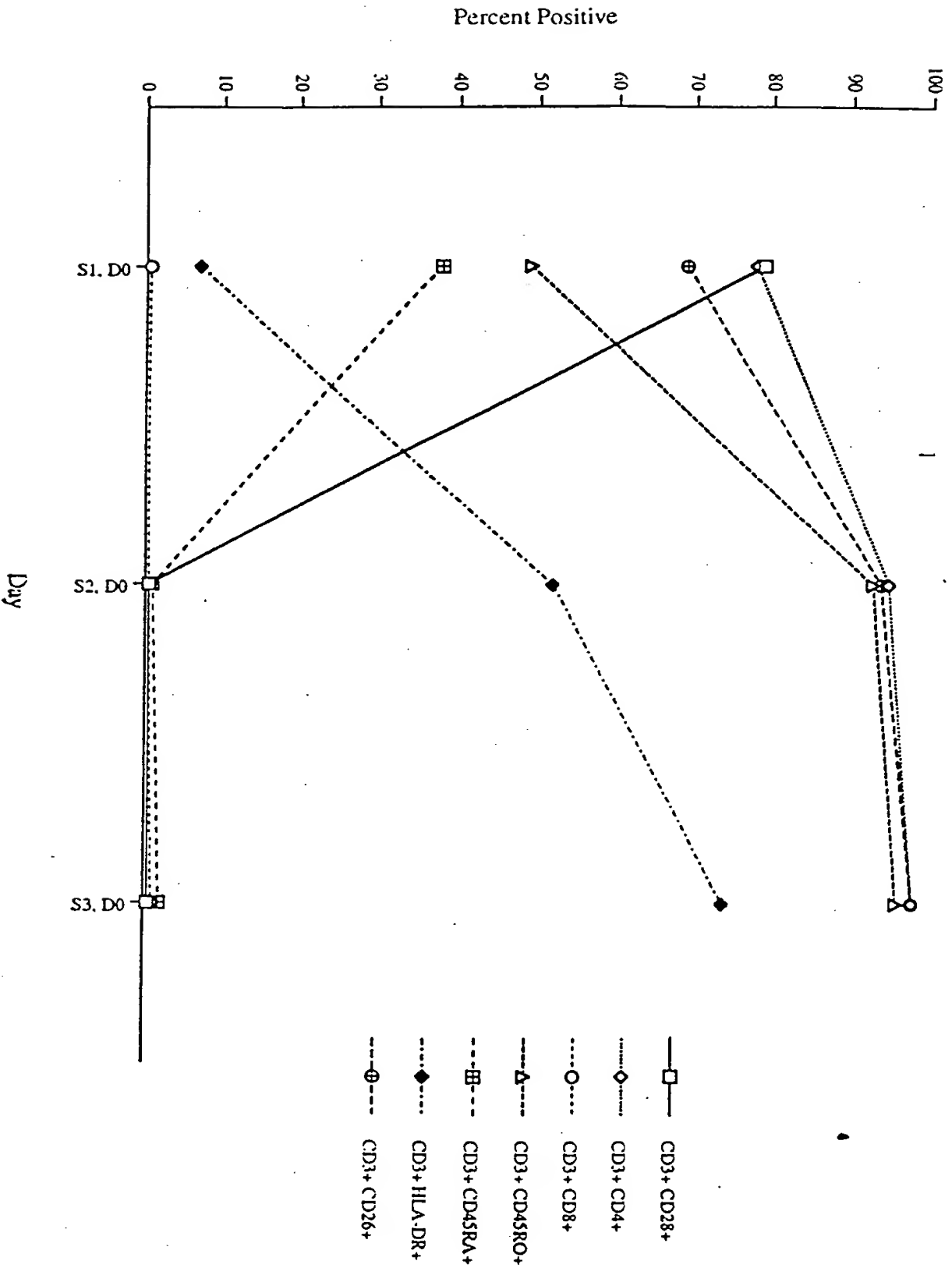


FIG. 15



(HIV+) Cell Surface Staining

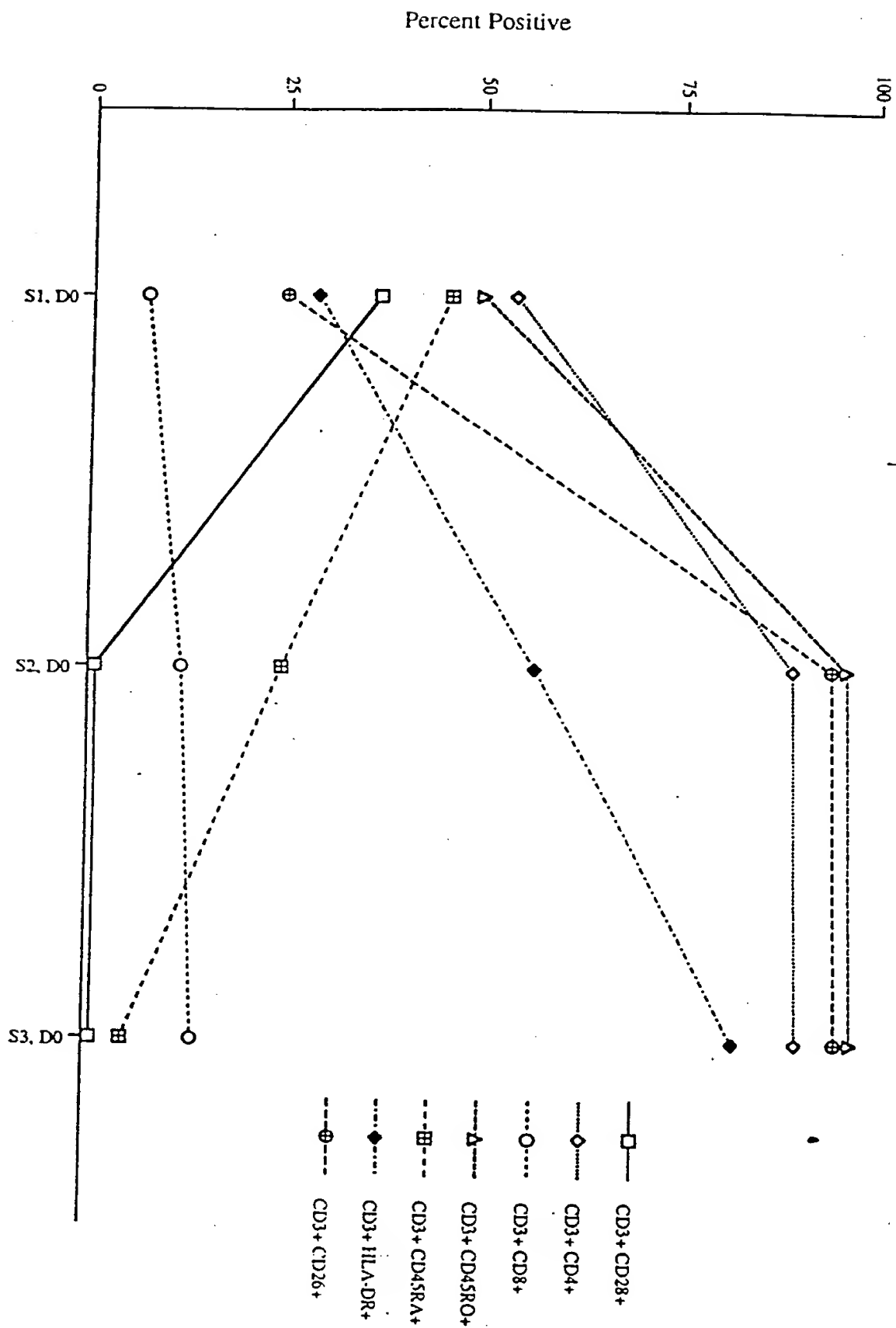


FIG. 16

Percent Positive

S1, D0

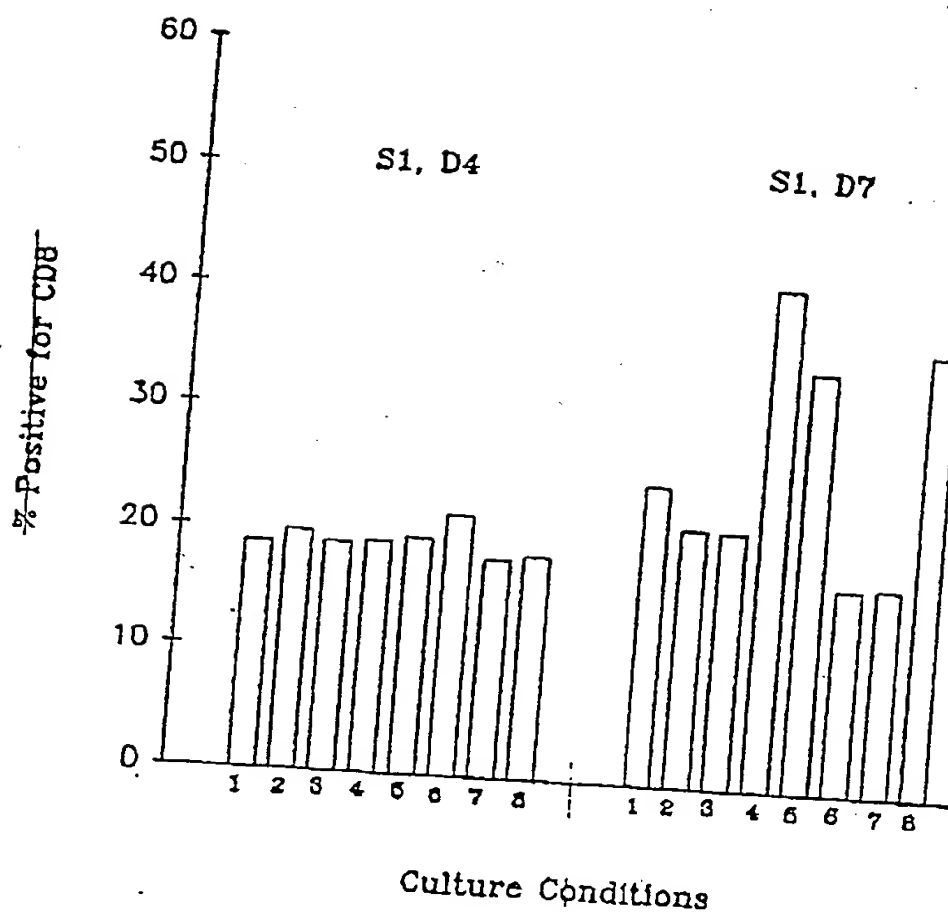
S2, D0

S3, D0

Day

09350202.070899

% Positive for CD8



- #1: G19-4sp + IL-2  
#2: G19-4sp + 9.3  
#3: G19-4sp + EX5.3D10  
#4: G19-4sp + ES4.2D8  
#5: G19-4sp + 7G11  
#6: G19-4sp + 9.3 + ES4.2D8  
#7: G19-4sp + 9.3 + 7G11  
#8: G19-4sp + ES4 + 7G11

FIG. 17

09350207.07350560

MOP cells transfected with plasmid encoding:

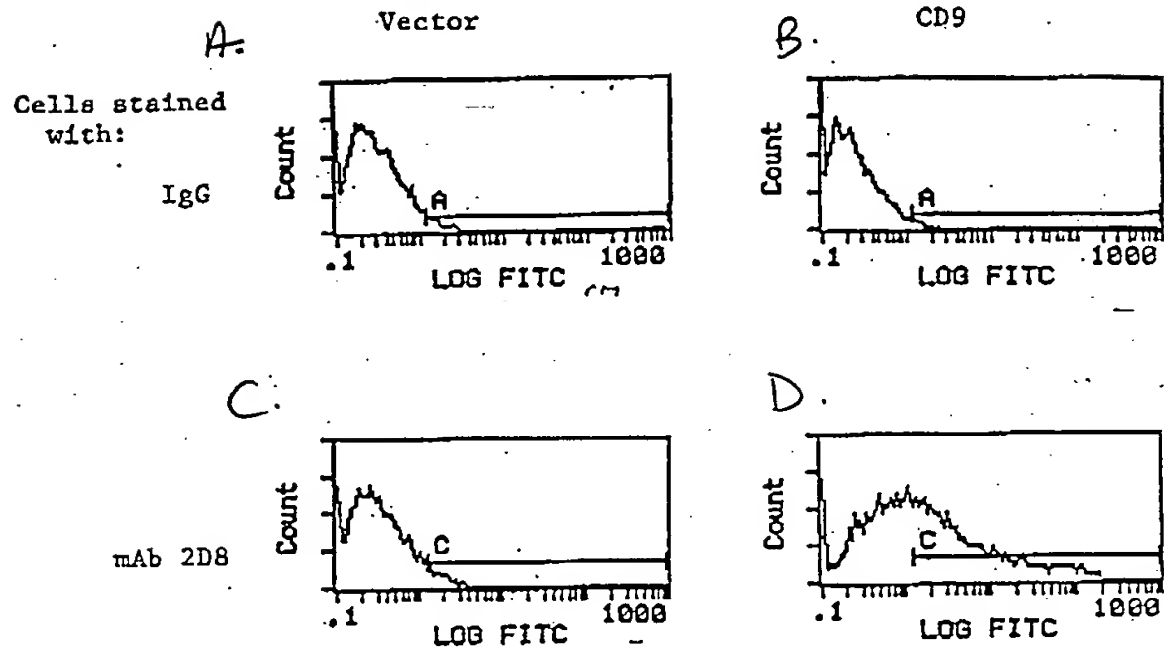


FIG. 18

668040" 20209E60

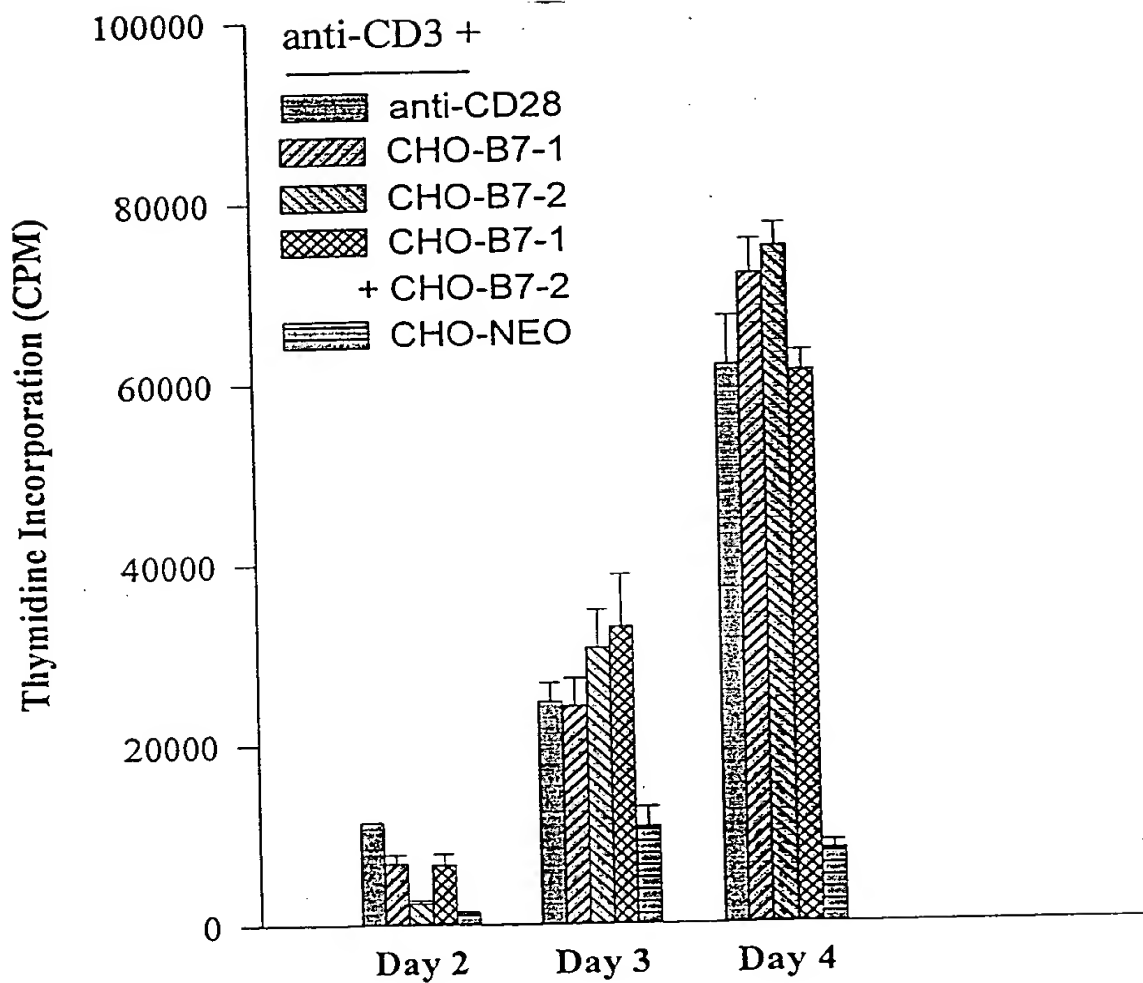


FIG. 19

658040 2020560

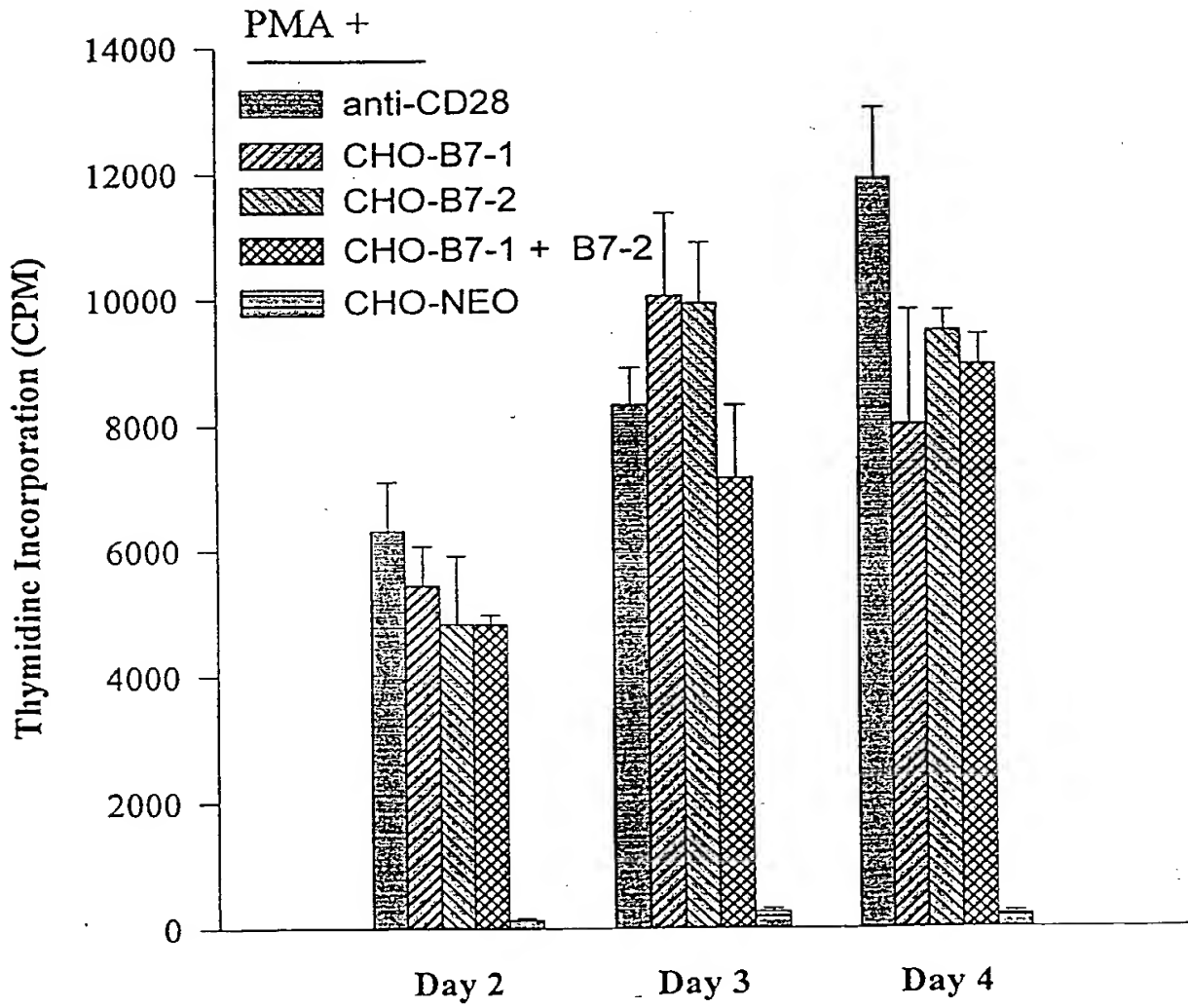


FIG. 20

558040 2020550  
Thymidine Incorporation (CPM)

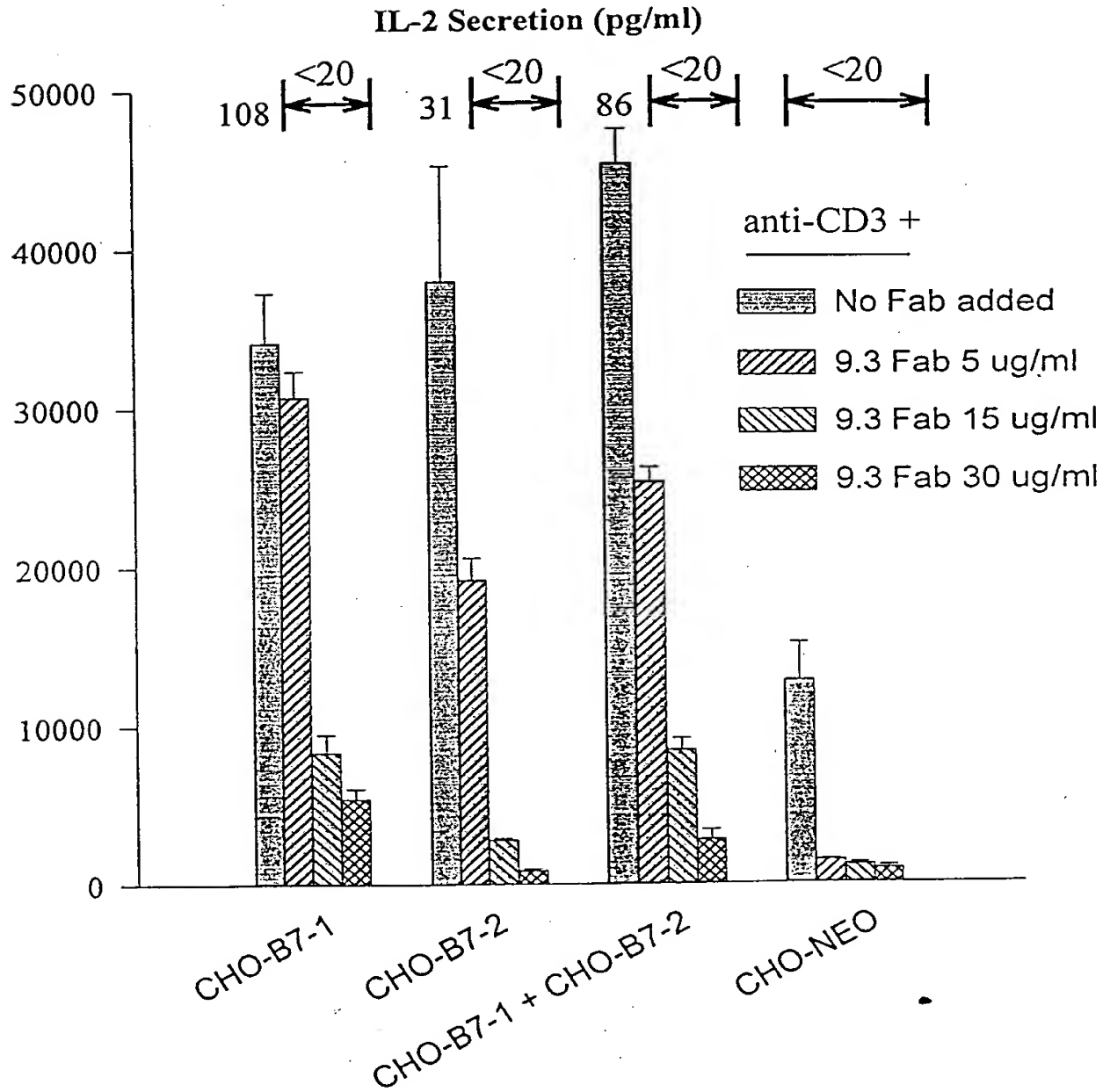


FIG. 21

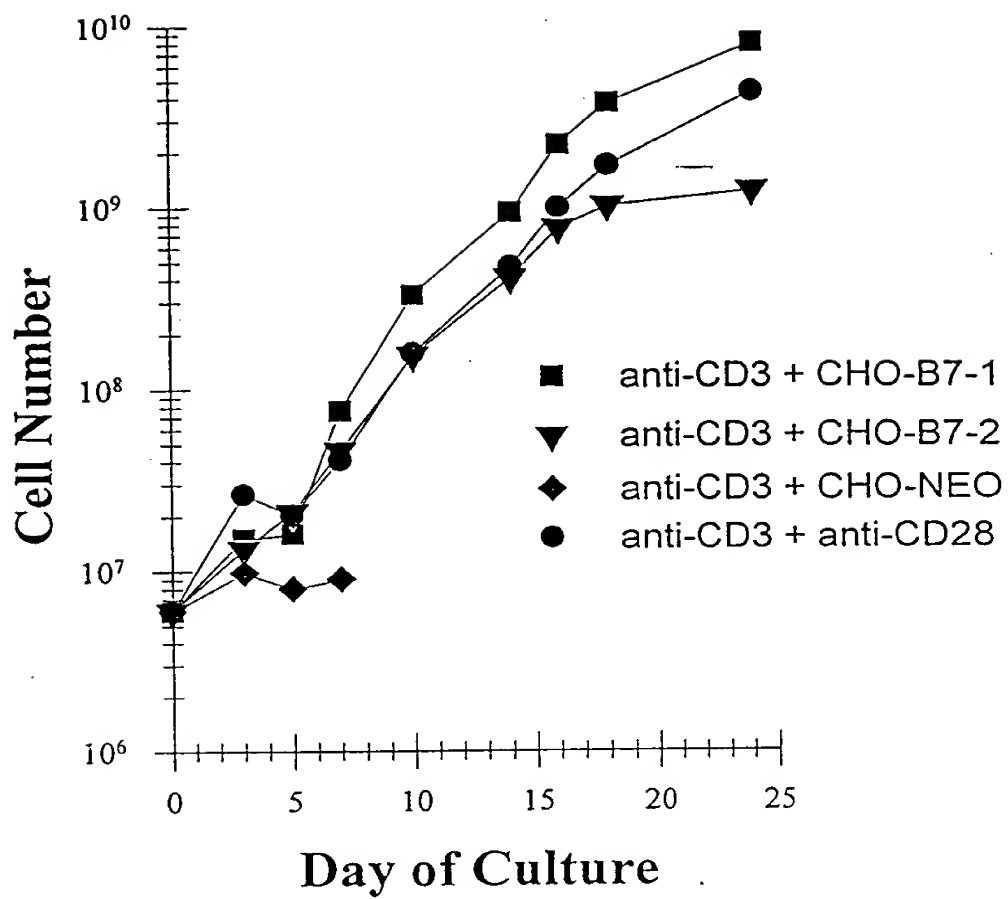
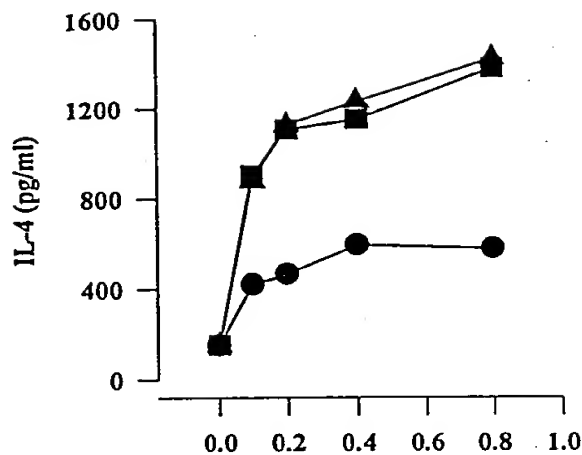
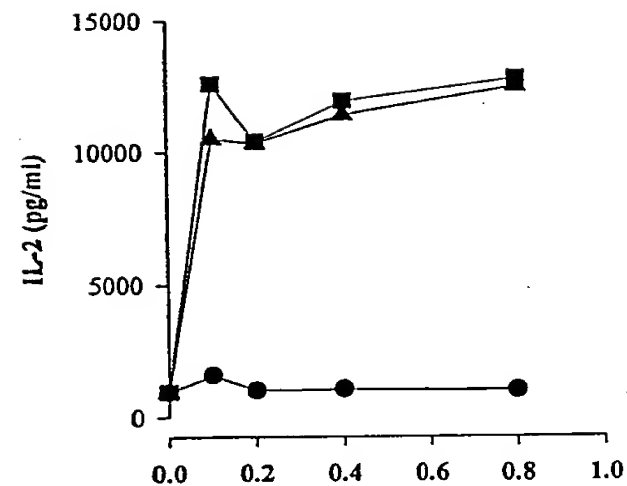
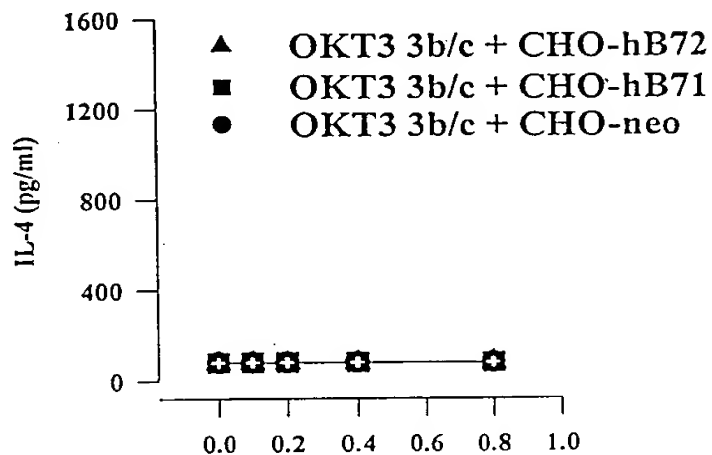
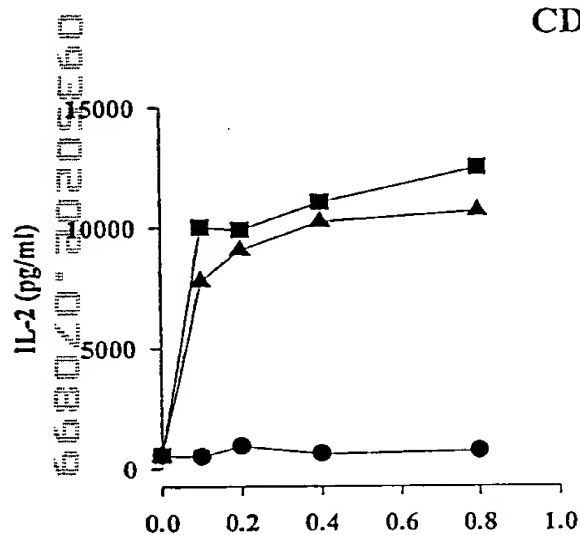


FIG. 22

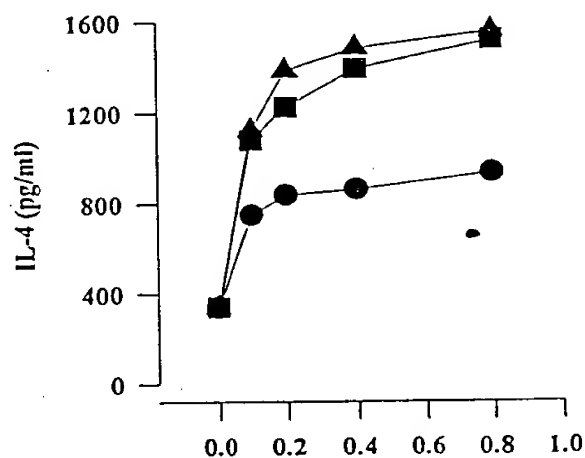
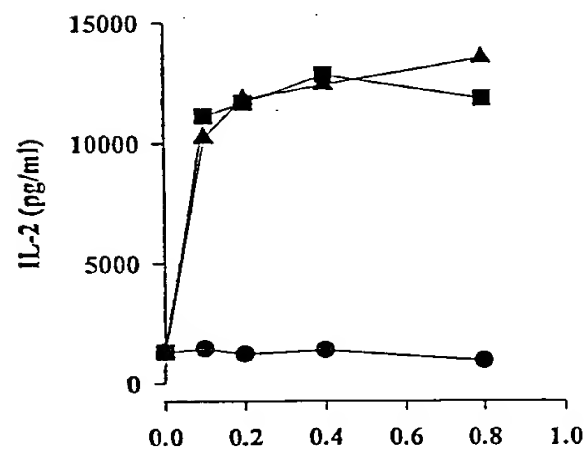
### CD4<sup>+</sup> T Cells



### CD4<sup>+</sup>/CD45RA<sup>+</sup> T Cells



### CD4<sup>+</sup>/CD45RO<sup>+</sup> T Cells

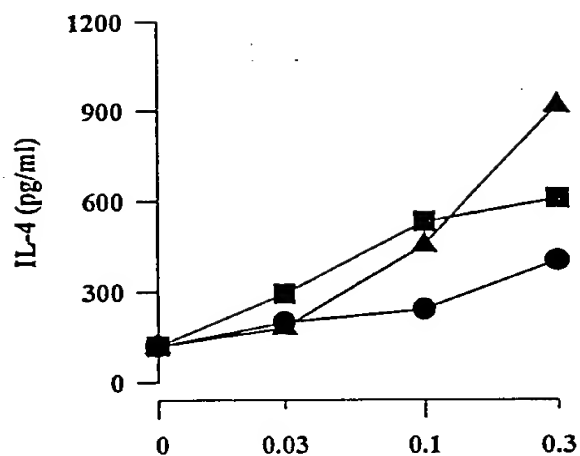
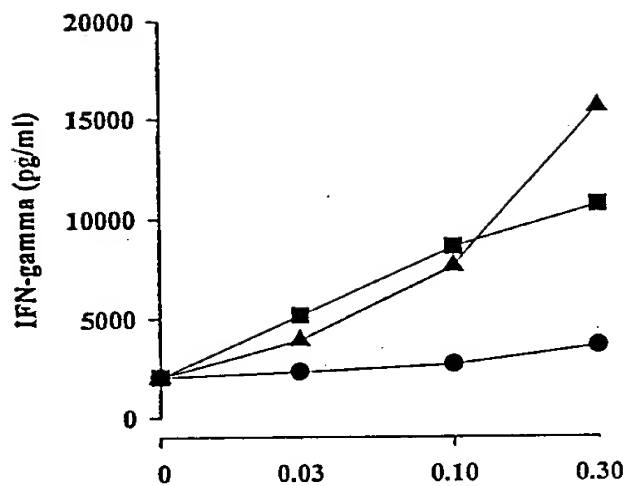


CHO Cells Per T Cell

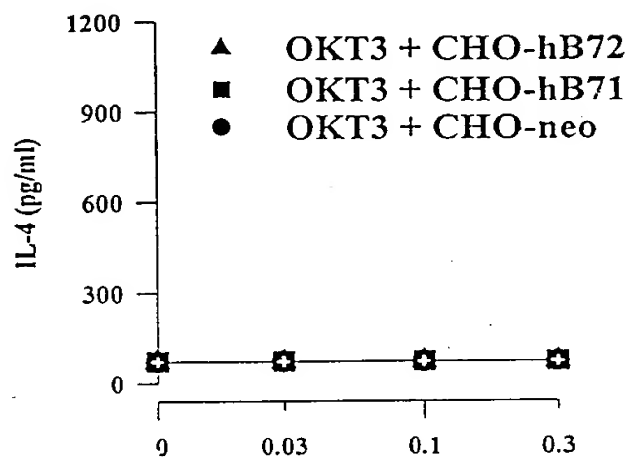
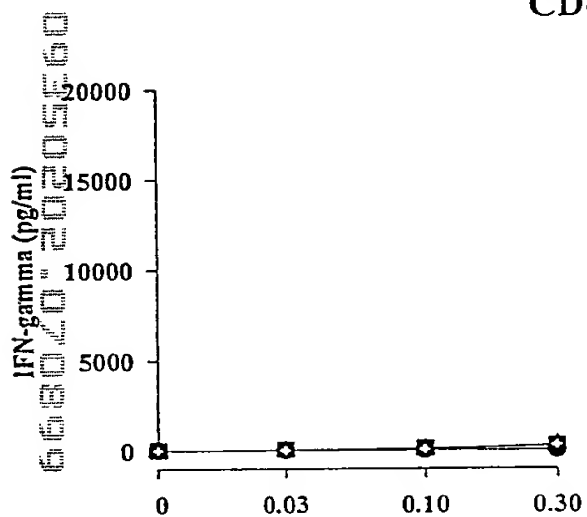
FIG. 23



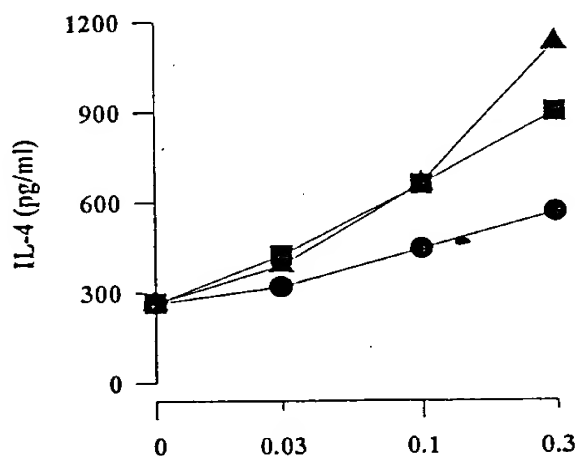
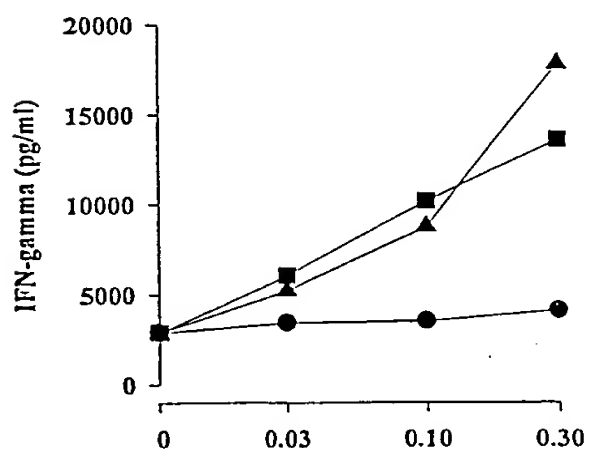
### CD4<sup>+</sup> T Cells



### CD4<sup>+</sup>/CD45RA<sup>+</sup> T Cells



### CD4<sup>+</sup>/CD45RO<sup>+</sup> T Cells



CHO Cells Per T Cell

FIG. 24

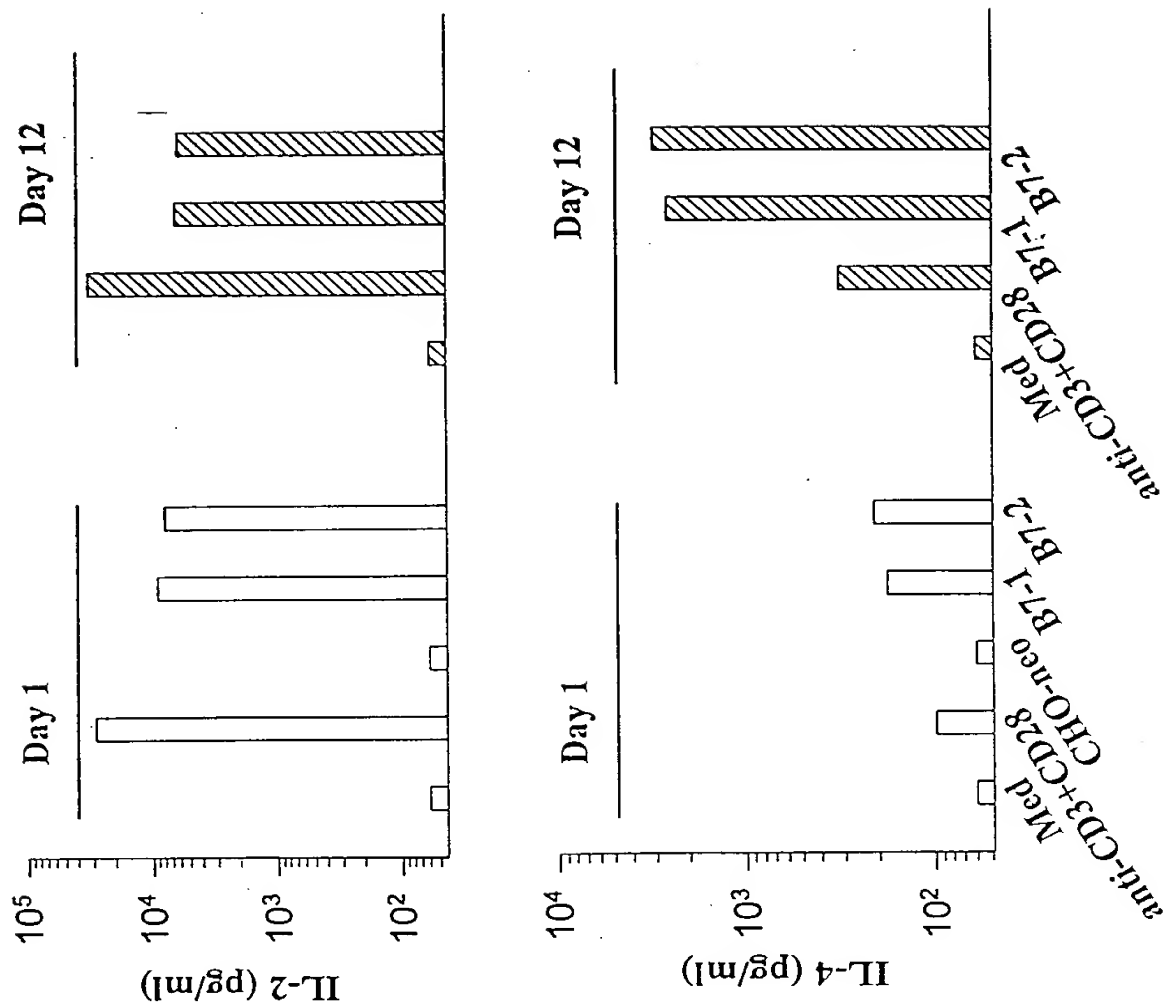


FIG. 25

658040 20205E60

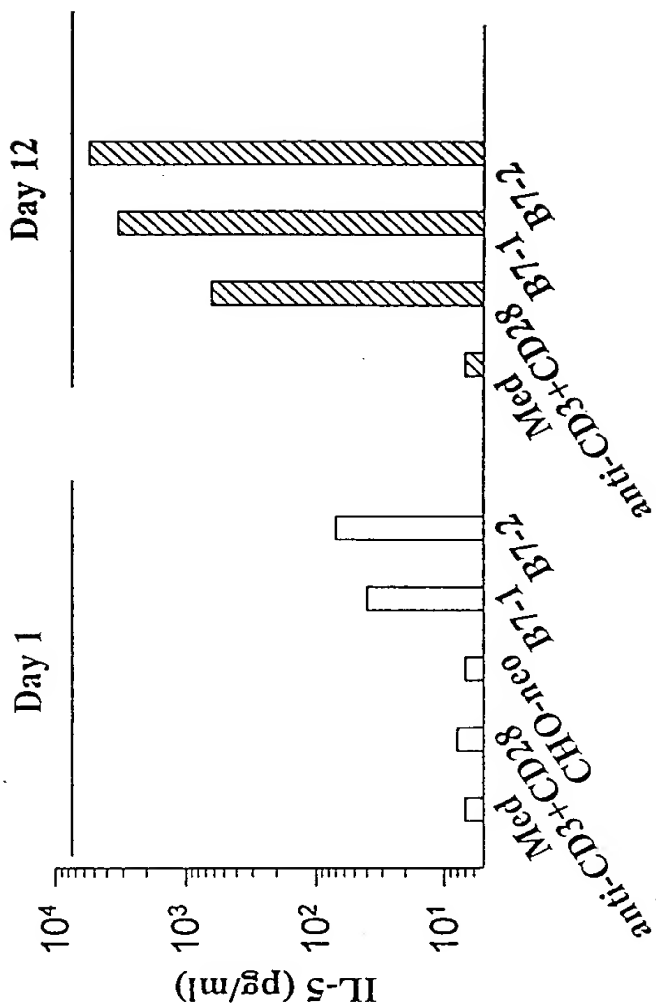
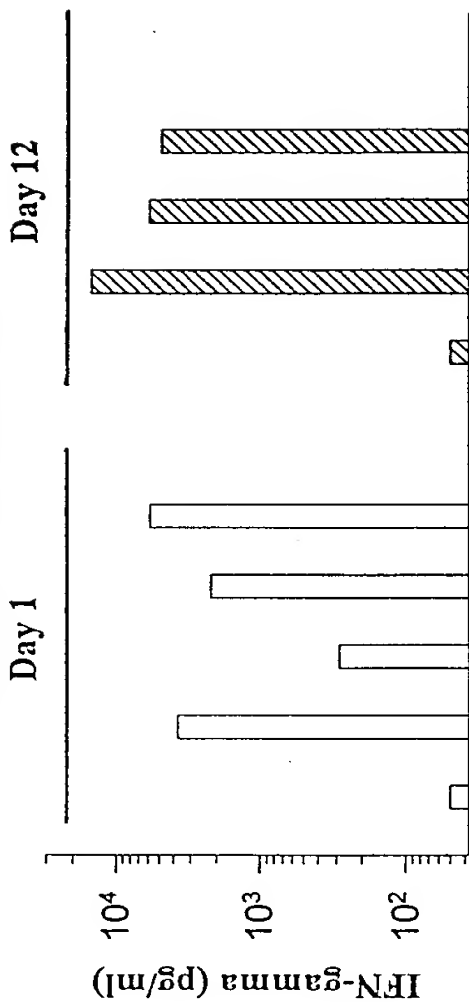


FIG. 24

668040" 2020560

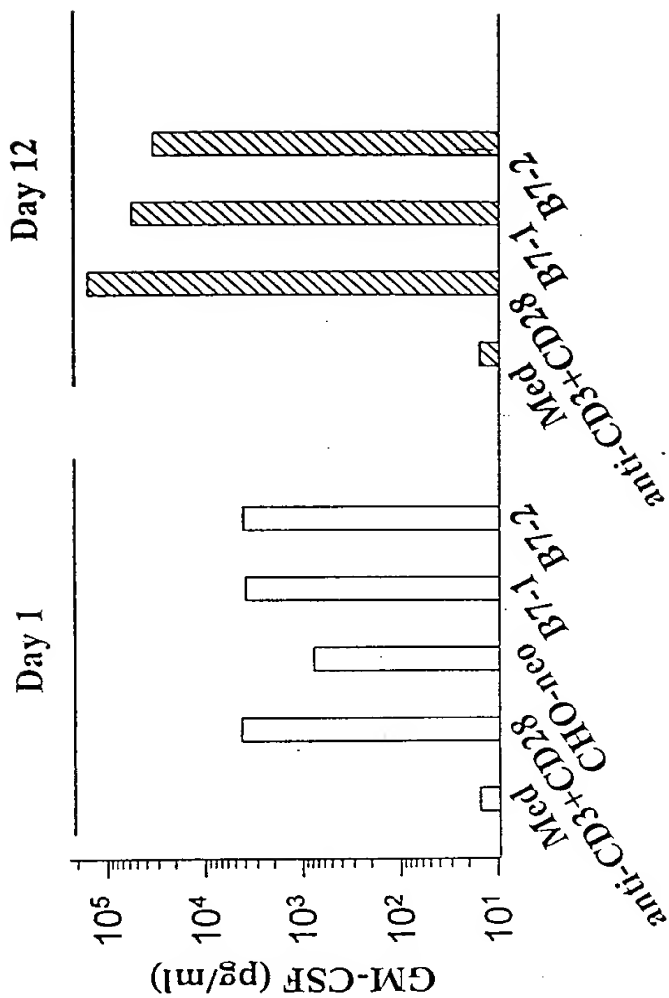
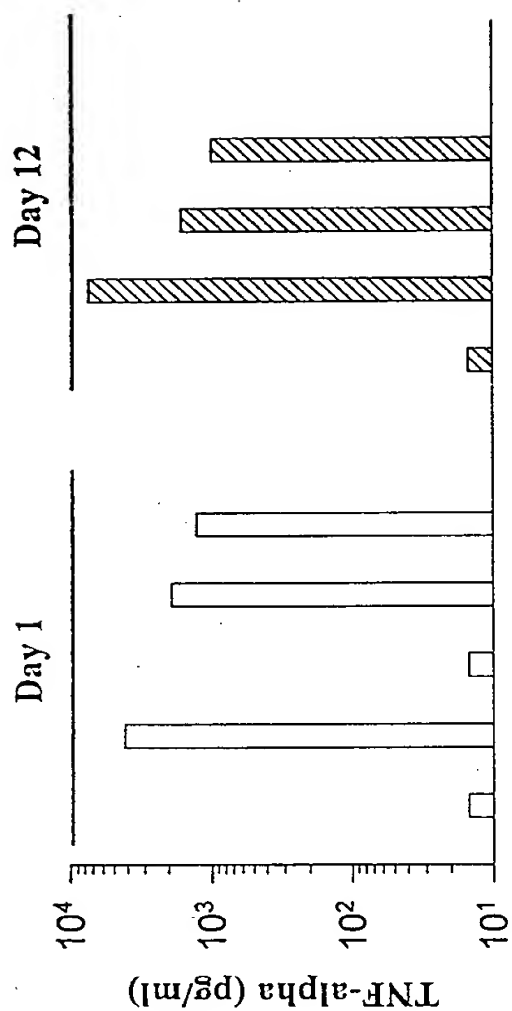
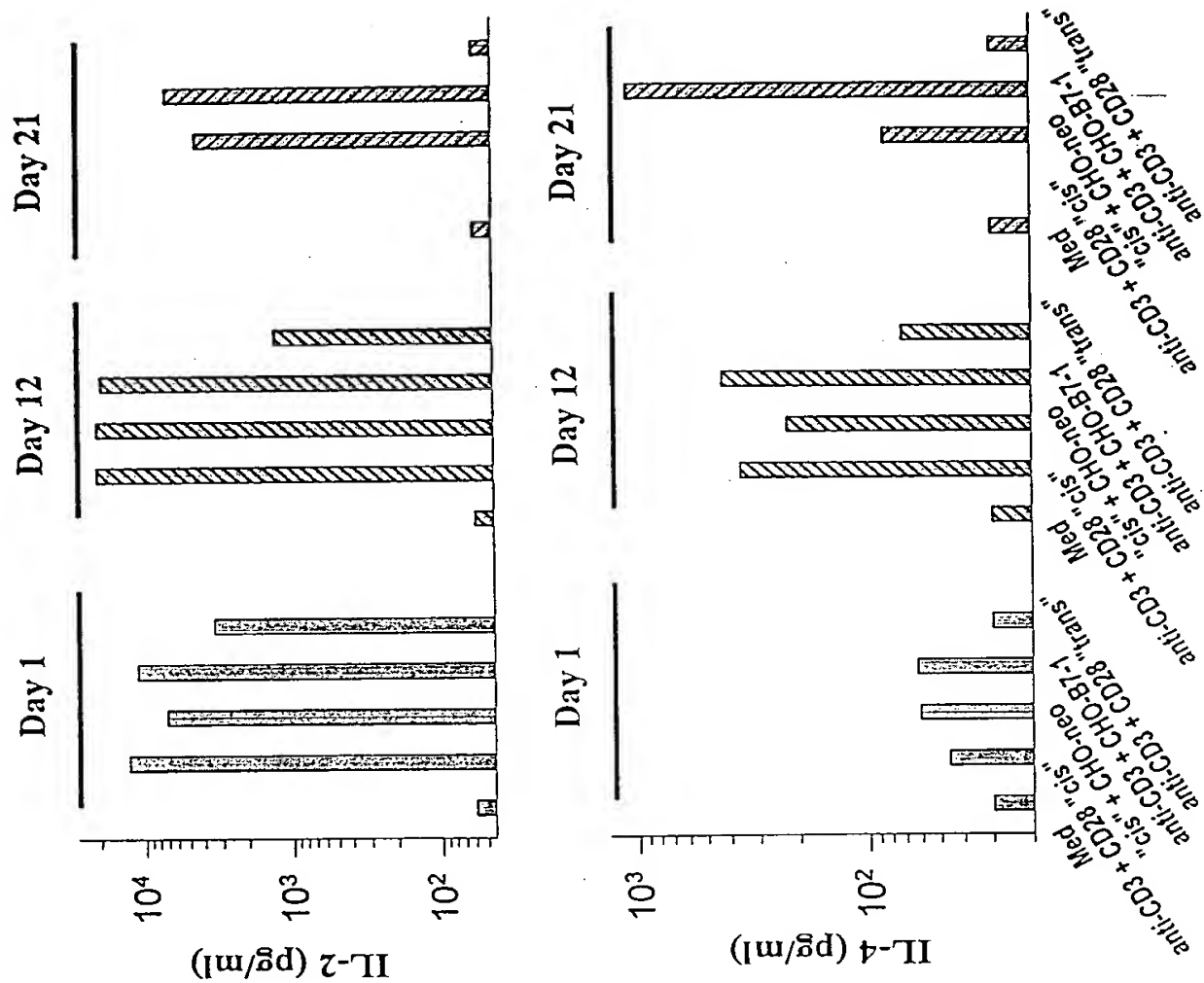


FIG. 27



6680/0" 20205160

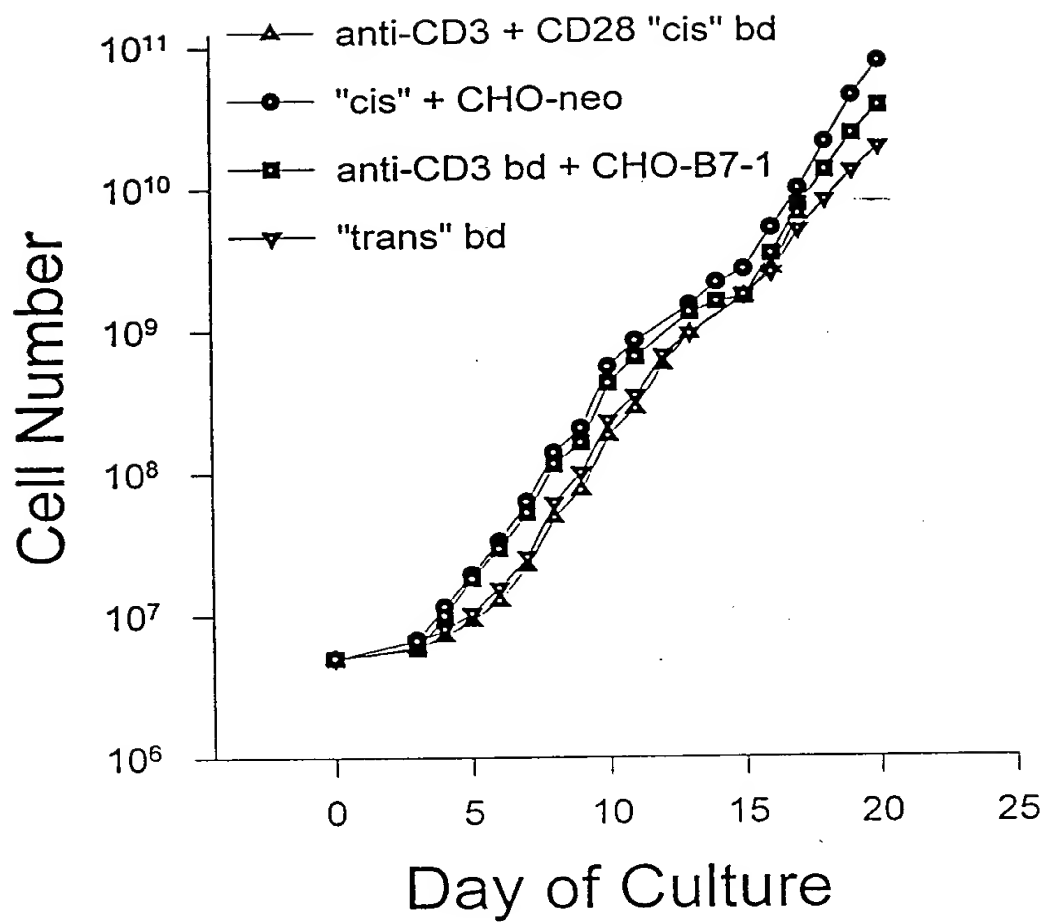


FIG. 29

668020" 20205560

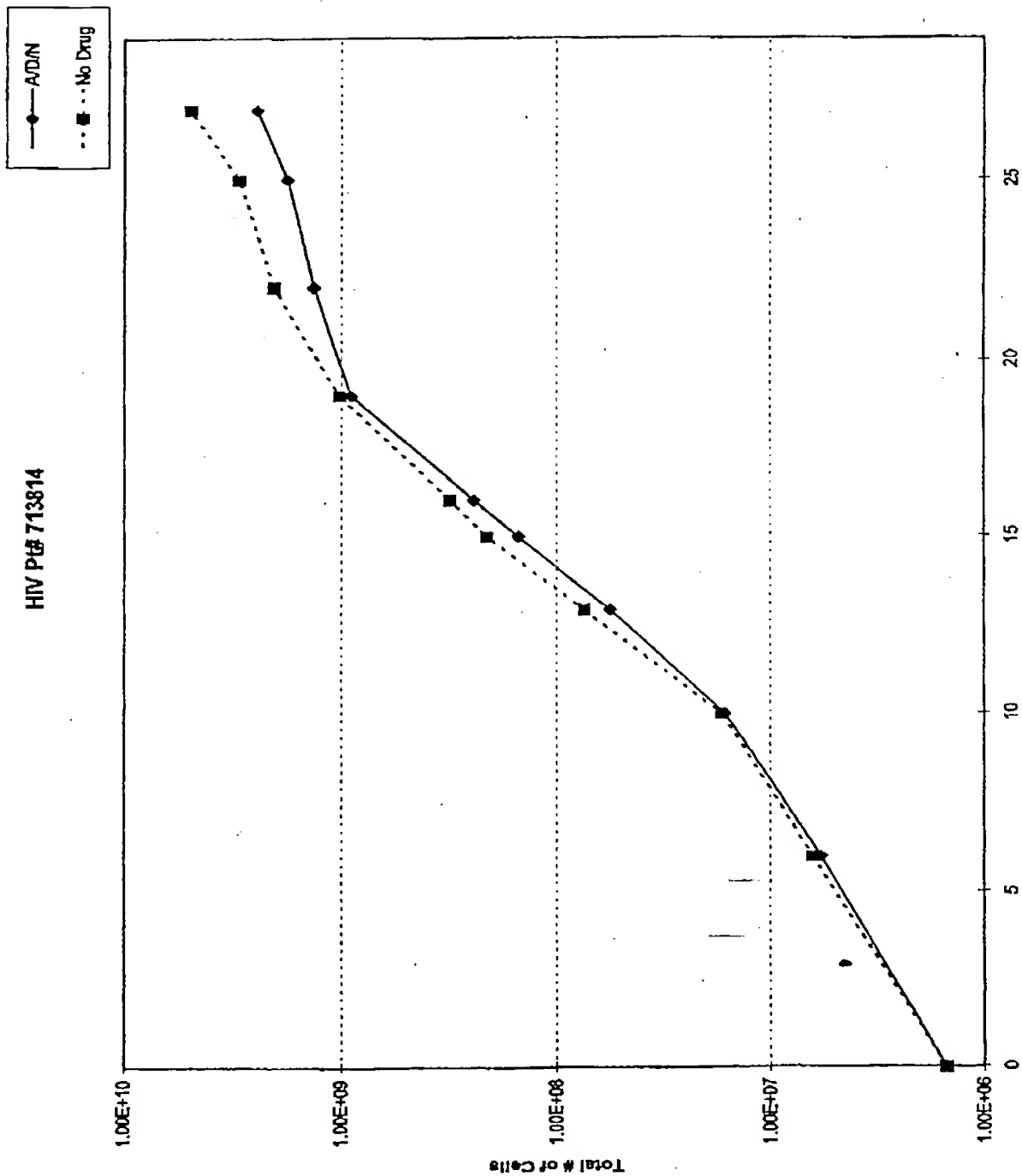


FIG. 30

668020 20205660

# POPULATION DOUBLING

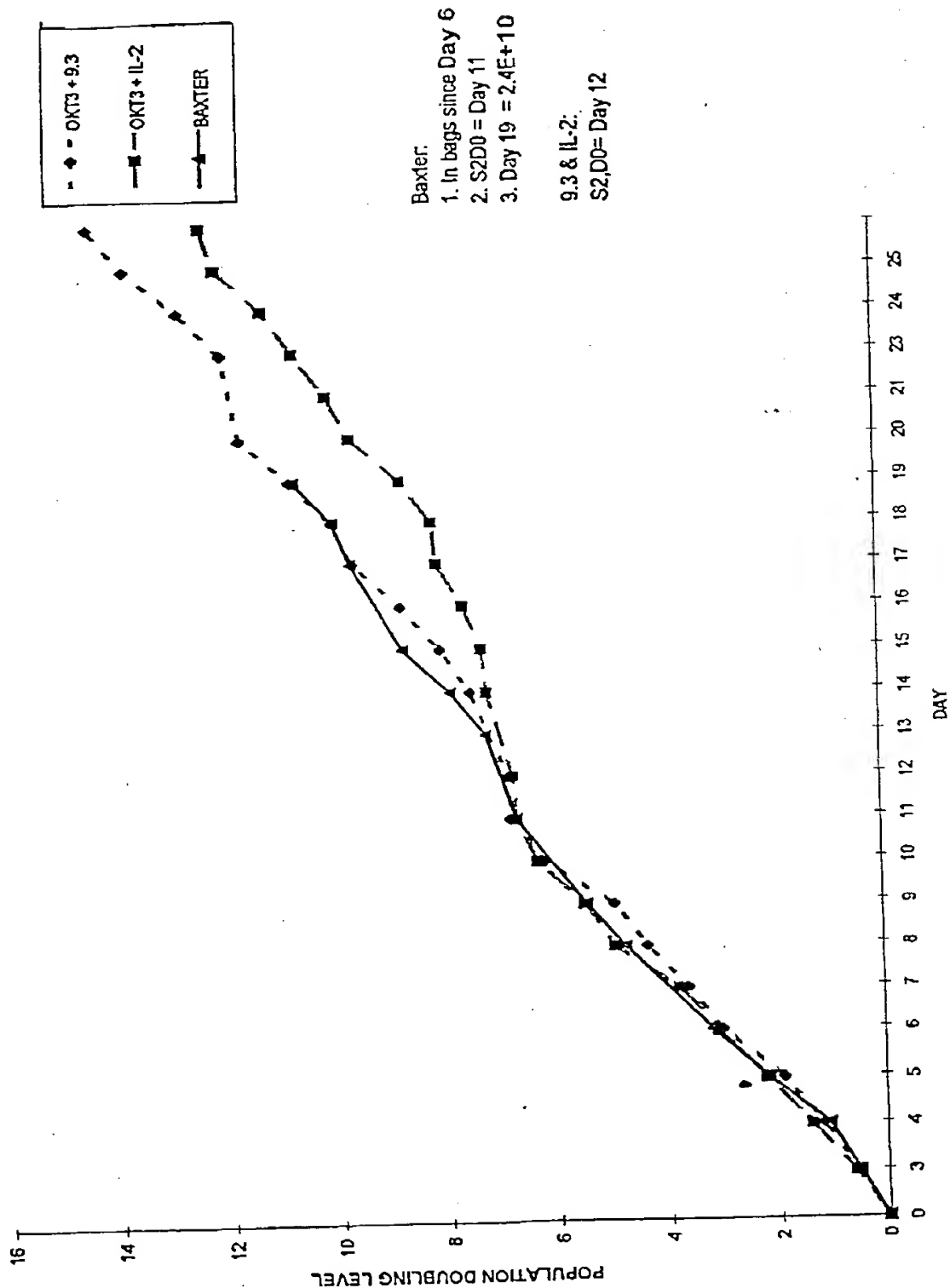


FIG. 31